

# register management flip-flops

inputis 1

reg1last

reg1full

# data buffer registers

reg 1

outputis 1

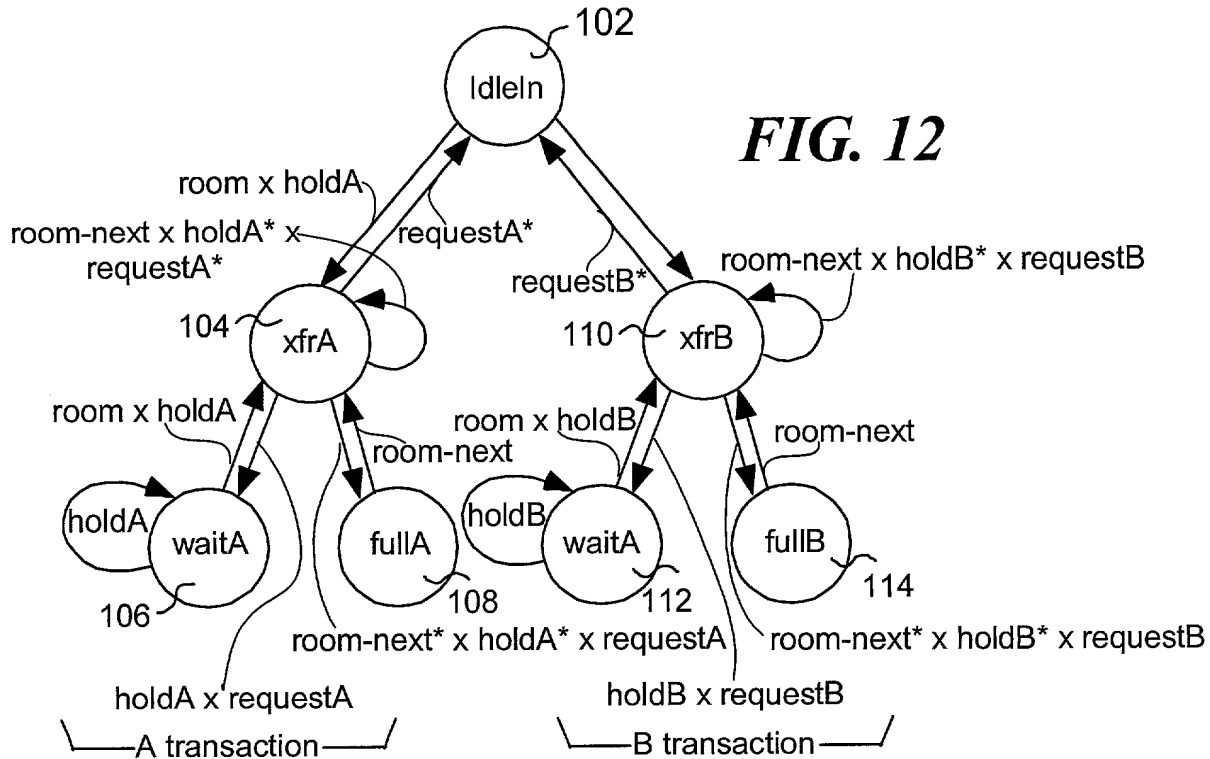
reg2last

reg2full

reg 2

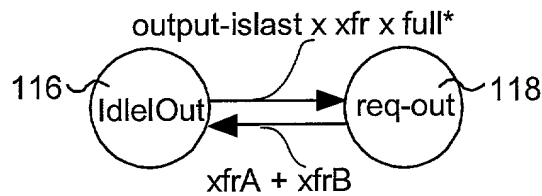
**FIG. 11**

**FIG. 12**



transaction = IdleIn\*  
 room-next = empty + xfr  
 room = reg1full\* + reg2full + xfr  
 full = reg1full x reg2full  
 empty = reg1full\* x reg2full\*

**FIG. 13**



register management flip-flops

inputis 1

route2A1

reg1last

reg1full

data buffer registers

reg 1

outputis 1

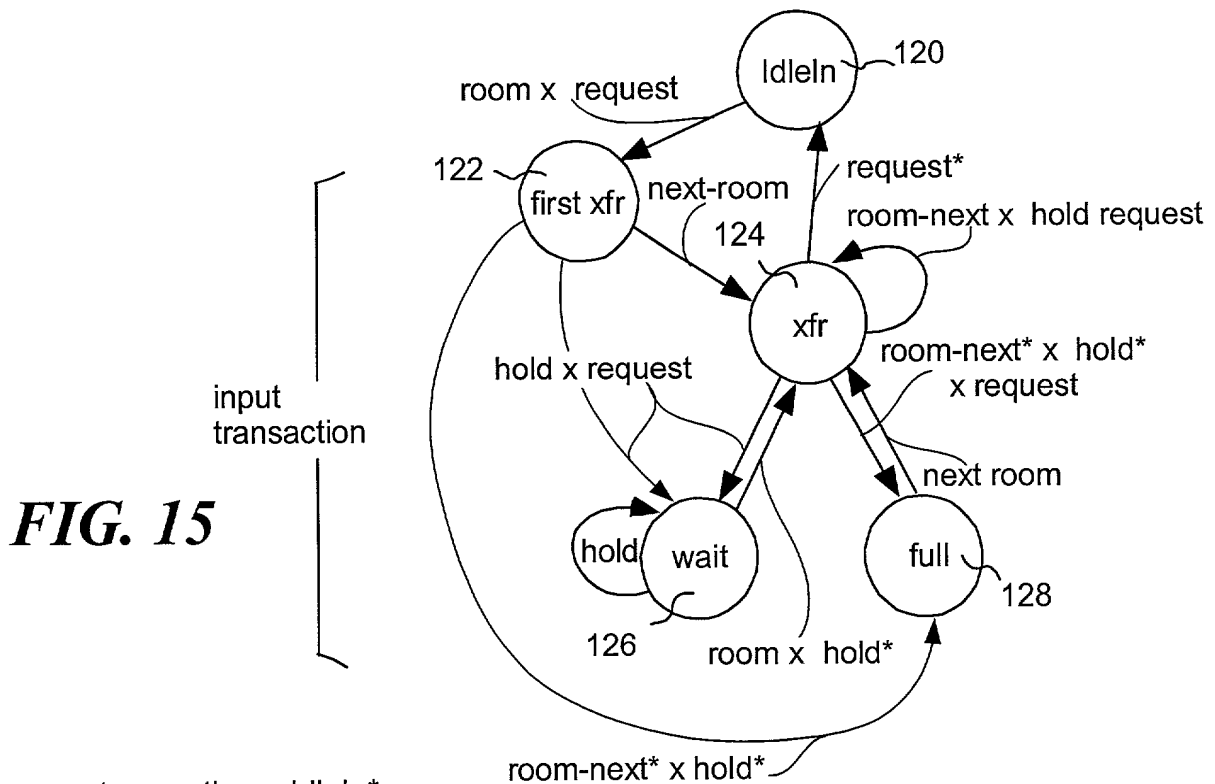
route2A2

reg2last

reg2full

reg 2

**FIG. 14**



transaction = IdleIn\*

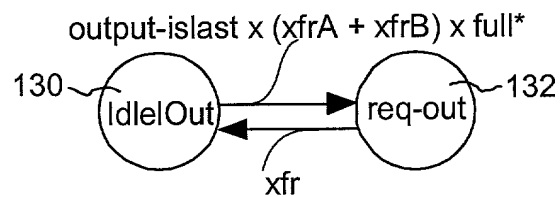
room-next = empty + xfrA + xfrB

room = reg1full\* + reg2full\* + xfrA + xfrB

full = reg1full x reg2full

empty = reg1full\* x reg2full\*

**FIG. 16**



# register management flip-flops

inputis 1

reg1last

reg1full

# data buffer registers

reg 1

outputis 1

reg2last

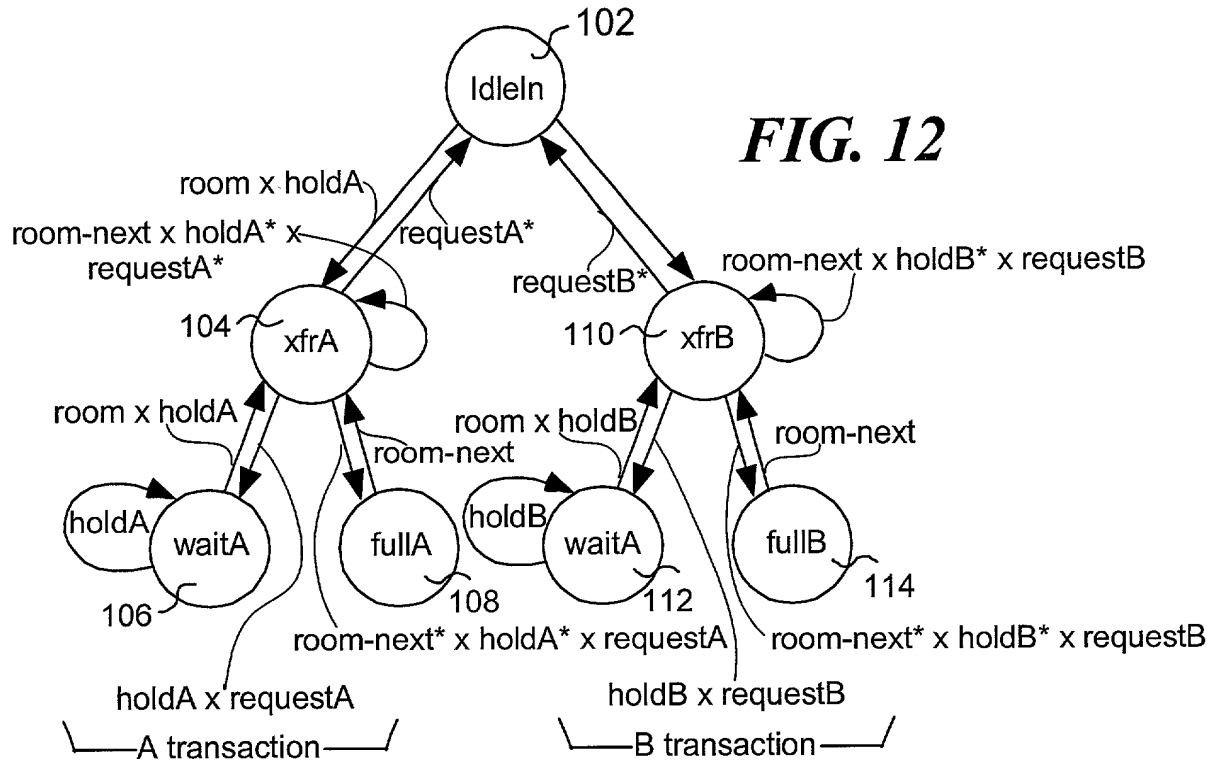
~~reg1full~~

~~reg 1~~

reg2 full

reg 2

FIG. 11



transaction = IdleIn\*

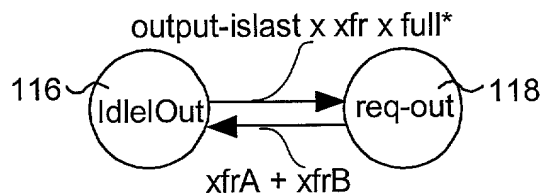
room-next = empty + xfr

room = reg1full\* + reg2full + xfr

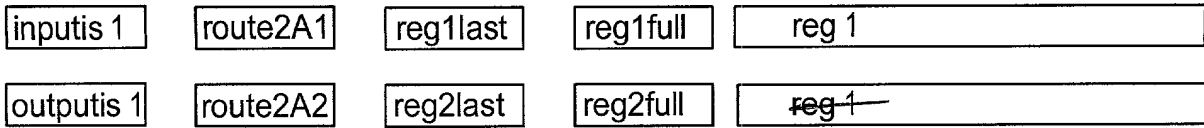
full = reg1full x reg2full

empty = reg1full\* x reg2full\*

FIG. 13



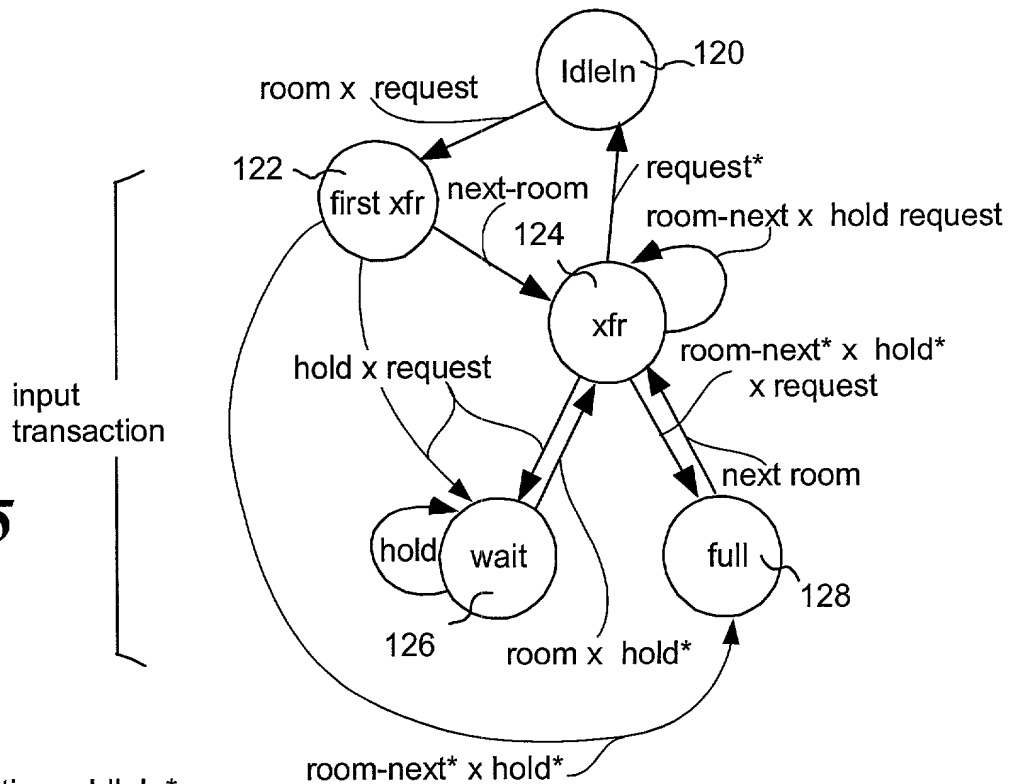
register management flip-flops



reg 2

**FIG. 14**

**FIG. 15**



$\text{transaction} = \text{IdleIn}^*$   
 $\text{room-next} = \text{empty} + \text{xfrA} + \text{xfrB}$   
 $\text{room} = \text{reg1full}^* + \text{reg2full}^* + \text{xfrA} + \text{xfrB}$   
 $\text{full} = \text{reg1full} \times \text{reg2full}$   
 $\text{empty} = \text{reg1full}^* \times \text{reg2full}^*$

**FIG. 16**

